Structural and nonlinear optical properties of as-grown and annealed metallophthalocyanine thin films

Titre	Structural and nonlinear optical properties of as-grown and annealed metallophthalocyanine thin films
Type de publication	Article de revue
Auteur	Zawadzka, Anna [1], Płóciennik, P. [2], Strzelecki, J. [3], Pranaitis, Mindaugas [4], Dabos, Sylvie [5], Sahraoui, Bouchta [6]
Editeur	Elsevier
Type	Article scientifique dans une revue à comité de lecture
Année	2013
Langue	Anglais
Date	10/2013
Pagination	429-437
Volume	545
Titre de la revue	Thin Solid Films
ISSN	0040-6090
Mots-clés	Annealing [7], devices [8], génération [9], Metallophtalocyanine [10], Phthalocyanine [11], Physical vapor deposition [12], process [13], Third harmonic [14], third order nonlinear optical susceptibility [15]
Résumé en anglais	The paper presents the Third Harmonic Generation investigation of four metallophtalocyanine (MPc, M = Cu, Co, Mg and Zn) thin films. The investigated films were fabricated by Physical Vapor Deposition in high vacuum onto quartz substrates. MPc thin films were annealed after fabrication in ambient atmosphere for 12 h at the temperature equal to 150 degrees C or 250 degrees C. The Third Harmonic Generation spectra were measured to investigate the nonlinear optical properties and their dependence on the structure of the thin film after the annealing process. This approach allowed us to determine the electronic contribution of the third-order nonlinear optical susceptibility chi(3)(elec) of these MPc films and to investigate two theoretical models for explanation of the observed results. We find that the annealing process significantly changes the optical and structural properties of MPc thin films. (C) 2013 Elsevier B.V. All rights reserved.
URL de la notice	http://okina.univ-angers.fr/publications/ua3204 [16]
DOI	10.1016/j.tsf.2013.07.042 [17]

Liens

[1] http://okina.univ-angers.fr/publications?f[author]=20792
[2] http://okina.univ-angers.fr/publications?f[author]=20794
[3] http://okina.univ-angers.fr/publications?f[author]=20831
[4] http://okina.univ-angers.fr/publications?f[author]=3683

[5] http://okina.univ-angers.fr/sylvie.dabos/publications
[6] http://okina.univ-angers.fr/bouchta.sahraoui/publications
[7] http://okina.univ-angers.fr/publications?f[keyword]=7121
[8] http://okina.univ-angers.fr/publications?f[keyword]=7092
[9] http://okina.univ-angers.fr/publications?f[keyword]=4372
[10] http://okina.univ-angers.fr/publications?f[keyword]=7118
[11] http://okina.univ-angers.fr/publications?f[keyword]=5680
[12] http://okina.univ-angers.fr/publications?f[keyword]=7119
[13] http://okina.univ-angers.fr/publications?f[keyword]=2552
[14] http://okina.univ-angers.fr/publications?f[keyword]=7120
[15] http://okina.univ-angers.fr/publications?f[keyword]=4928
[16] http://okina.univ-angers.fr/publications/ua3204
[17] http://dx.doi.org/10.1016/j.tsf.2013.07.042